

1. Write a program to display name of your college.
2. Write a program to find the distance between two points (x1, y1) and (x2,y2).Read coordinate from user.
3. Write a program to find the circumference of a circle. [ Hint:  $c=2\pi r$  ].
4. Write a program to use the use of **typedef**.
5. Write a program to illustrate the use of **sizeof** operator.
6. Write a program to find the ASCII values of various letters and digits.
7. Write a program to illustrate different format specifications for printing integer numbers, real numbers and strings.
8. What are the control statements that are available in C language? Write a program to print the larger and smaller number of two numbers.
9. Write a program to find whether given number is odd or even.
10. What do you mean by nested if statements? Write Syntax and draw the flow chart of nested if statement. Write a program to find the largest number from three given numbers using nested if statement.
11. Write a program to find the second largest number among any three numbers.
12. Write a program to find whether a year is leap or not.

*Hint:*

```
Read year
If(year%4==0)
{
    If(year%100==0)
    {
        If(year%400==0)
        Printf("%d is leap year",year);
        Else
        Printf("%d is not leap year",year);
    }
    Else
    Printf("%d is a leap year",year);
}
Else
Printf("%d is not leap year",year);
}
```

13. Write a program to find the roots of a quadratic equation. Read coefficients from the users and checks imaginary and real root.

14. Differentiate between if....else and switch statements. Write a program that masks an arithmetic operator and two operands and performs the corresponding operation on the operands.
15. Write a program to find the value of y by reading value of x from the users by using conditional operator.

Y =                    2x+300            for x<50  
                         200                for x=50  
                         50x-100           for x>50

[Hint:  $y=(x!=50)?((x<50)?(2x+300):(50x-100)):200$ ]

16. Why repetitive statements (loop) are used? List looping statements. Write a program to find the multiplication of two numbers without using multiplication operator.  
[Hint: using repetitive addition]
17. Write a program to find whether given number is prime or composite.
18. Write a program to find the sum of first n-natural numbers and then find average.
19. Write a program to read two integers n1 and n2. And display all even numbers between those two numbers.
20. What is nested loop? Explain use of break and continue statements. Write a program to print the prime numbers between 1 to 100.
21. Write a program to find HCF of any two numbers.

*Hint:*

*Read a, b*

*do*

*{*

*r=a%b;*

*if(r==0)*

*printf("HCF=%d",b);*

*else*

*{*

*a=b;*

*b=r;*

*}*

*}while(r!=0);*

22. Write a program to find LCM of any two numbers.

*Hint:*

*Read x, y*

*a=x, b=y;*

*While (a!=b)*

*{*

*If(a<b)*

*a=a+x*

*Else*

*b=b+y*

*}*

*Print a as LCM.*

22. Write a program to find the sum of the digits of given number.

Hint:

```
While (n>0)
{
    R=n%10;
    S=S+R;
    n/=10;
}
```

23. Write a program to find the products of the digits of any number.

24. Write a program to find reverse of given number.

25. Write a program to find whether a given number is palindrome or not.

26. Write a program to find binary equivalent of given decimal number.

Hint:

```
Read n
Base=1;
s=0;
while (n!=0)
{
    R=n%2;      s=s + r * base;      base=base*10;      n=n/2;
}
```

27. Write a program to convert the given binary number to its equivalent decimal number.

Hint:

```
Read n
J=1;
Dec=0;
While(n>0)
{
    R=n%10;
    Dec=Dec+r*j;
    n/=10;
}
Print dec
```

28. Write a program to find whether given number is Armstrong number or not.

Hint: [371 is Armstrong number because  $3^3+7^3+1^3=371$ ]

29. Write a program to display Armstrong numbers between 100 to 1000.

30. Write a program to find sum of the square of all odd numbers from 1 to 100.

31. Write a program to find the factorial of given number.

32. Write a program to display the Fibonacci series (0, 1, 1, 2, 3, 5, 8, 13, 21, .....). Read nth term from the user using iteration.

Hint:

```
Read n
First=0;
Second=1;
While (term<n)
{
```

```
    Printf ("%d\t", Term);
    First=Second;
    Second=Term;
    Term=First + Second;
}
```

33. Write a program to find the sum of following series:

34.  $1+2+4+7+11+16+\dots$  up to n term.

35. Write a program to evaluate the expression:  $\text{result} = e^{(-0.1t)} \sin(0.5t)$  for  $t=0$  to 20 in interval of 2.

Hint:

For( $t=0$ ;  $t \leq 20$ ;  $t=t+2$ )

```
{
    Result=(exp(-0.1*t)*sin(0.5*t));
    Print Result;
}
```

36. Write a program to print the following pattern using nested loops.

```
*
* *
* * *
* * * *
* * * * *
```

37. Write a program to print the following pattern using nested loop.

```
*
* *
* * *
* * * *
* * * * *
* * * *
* * *
* *
*
```

38. Write a program to print the following pattern (Floyd's Triangle) using nested loops

```
1
2 3
4 5 6
7 8 9 10
11 12 13 14 15
```

39. Write a program to print the Pascal triangle.

```

          1
        1 1
      1 2 1
    1 3 3 1
  1 4 6 4 1
1 5 10 10 5 1
```

[Hint: Calculate power of 11 from 0 through 10]

40. Write a program to find the terms in the given series till the term value is less than 250  
(12+22)/3, (22+32)/4, (32+42)/5, .....

Hint:

Term=0; i=1;

While(term<250)

```
{
    Term=((i*i)+(i+1)*(i+1))/((float)(i+2));
    Print Term;
    i++;
}
```

41. Write a program to compute the following series (Euler's number series)

$1 + 1/1! + 1/2! + 1/3! + \dots + 1/n!$

Read n from user

